

Amendments to the Claims

1. (currently amended) A method for enhancing image quality of an original digital image having initial image quality issues comprising the steps of:
 - a) locating human faces within said original digital image having initial image quality issues, said original digital image captured during a picture capture stage by a digital camera;
 - b) analyzing said digital image, said analysis including analysis of said human faces located in step a) and including analysis of said digital image as a whole;
 - c) utilizing said analysis of said faces located in step a) and using said analysis of said image as a whole to determine ~~determining~~ a tone mapping function for enhancing the image quality of said original digital image, said tone mapping function utilizing optimal ranges, instead of optimal values, combined in a system energy formulation ~~determined using both analysis of said faces located in step a) and using said analysis of said image as a whole;~~ and
 - d) applying said tone mapping function determined in step c) to said digital image so as to produce an enhanced digital image different from said original digital image, wherein a mapped deviation of the human face region of the enhanced digital image is greater than the deviation of the human face region of the original digital image.
2. (original) The method of Claim 1 wherein steps a) through d) are performed automatically and without any user input.
3. (original) The method of Claim 1 wherein step a) further comprises:
 - a1) applying a face detection algorithm to said digital image for locating faces within said digital images.

4. (currently amended) The method as recited in Claim 1 wherein said tone mapping function ~~includes~~ comprises:
combining both psychological factors and signal factors in said system energy formulation.
5. (original) The method as recited in Claim 4 wherein said psychological factors include average face region lightness and average picture lightness.
6. (original) The method as recited in Claim 4 wherein said signal factors include digital resolution and face region contrast.
7. (previously presented) The method as recited in Claim 6 wherein said signal factors include histogram uniformity and noise.
8. (currently amended) The method as recited in Claim 4 ~~wherein step e)~~ further ~~includes~~ comprising:
generating a look-up table that corresponds to said a tone mapping curve.
9. (previously presented) The method as recited in Claim 8 wherein step d) further comprises applying the tone properties within said lookup table to said digital image so as to alter the tone values of said digital image, thereby producing an enhanced digital image having altered tone values.
10. (original) The method as described in Claim 1 further comprising the steps of:
d1) converting said digital image from an original format into a $L^*a^*b^*$ format prior to performing step a); and
d2) converting said digital image back into said original format after step d) has been performed.

11. (currently amended) In a computer system including a processor coupled to a bus, and a memory unit coupled to the bus for storing information, a computer-implemented method for enhancing image quality of an original digital image having initial image quality issues comprising the steps of:

a) locating human faces within said original digital image having initial image quality issues, said original digital image captured during a picture capture stage by a digital camera;

b) analyzing said digital image, said analysis including analysis of said human faces located in step a) and including analysis of said digital image as a whole;

c) utilizing said analysis of said faces located in step a) and using said analysis of said image as a whole to determine ~~determining~~ a tone mapping function for enhancing the image quality of said original digital image, said tone mapping function utilizing optimal ranges, instead of optimal values, combined in a system energy formulation ~~determined using both analysis of said faces located in step a) and using said analysis of said image as a whole;~~ and

d) applying said tone mapping function determined in step c) to said digital image so as to produce an enhanced digital image different from said original digital image, wherein a mapped deviation of the human face region of the enhanced digital image is greater than the deviation of the human face region of the original digital image.

12. (original) The method of Claim 11 wherein steps a) through d) are performed automatically and without any user input.

13. (original) The method of Claim 12 wherein step a) further comprises:

a1) applying a face detection algorithm to said digital image for locating faces within said digital images.

14. (currently amended) The method as recited in Claim 13 wherein said tone mapping function ~~includes~~ comprises:

combining both psychological factors and signal factors.

15. (original) The method as recited in Claim 14 wherein said psychological factors include average face region lightness and average picture lightness.

16. (original) The method as recited in Claim 14 wherein said signal factors include digital resolution and face region contrast.

17. (previously presented) The method as recited in Claim 16 wherein said signal factors include histogram uniformity and noise.

18. (currently amended) A computer –readable storage medium storing instructions that, when executed by a computer, cause the computer to perform a method for enhancing image quality of an original digital image having initial image quality issues comprising the steps of:

a) locating human faces within said original digital image having initial image quality issues, said original digital image captured during a picture capture stage by a digital camera;

b) analyzing said digital image, said analysis including analysis of said human faces located in step a) and including analysis of said digital image as a whole;

c) utilizing said analysis of said faces located in step a) and using said analysis of said image as a whole to determine ~~determining~~ a tone mapping function for enhancing the image quality of said original digital image, said tone mapping function utilizing optimal ranges, instead of optimal values, combined in a system energy formulation ~~determined using both analysis of said faces located in step a) and using said analysis of said image as a whole~~; and

d) applying said tone mapping function determined in step c) to said digital image so as to produce an enhanced digital image different from said original digital image, wherein a mapped deviation of the human face region of the enhanced digital image is greater than the deviation of the human face region of the original digital image.

19. (original) The computer-readable storage medium of Claim 18 wherein steps a) through d) are performed automatically and without any user input.

20. (currently amended) The method as recited in Claim 19 wherein said tone mapping function ~~includes~~ comprises:

combining both psychological factors and signal factors.

21. (original) The method as recited in Claim 20 wherein said psychological factors include average face region lightness and average picture lightness.

22. (original) The method as recited in Claim 21 wherein said signal factors include digital resolution, face region contrast and histogram uniformity.

23. (currently amended) The method as recited in Claim 18 ~~wherein step c)~~ further ~~includes~~ comprising:

generating a look-up table that corresponds to said a tone mapping curve.

24. (original) The method as recited in Claim 23 wherein step d) further comprises applying the tone properties within said lookup table to said digital image so as to alter the tone values of said digital image, thereby producing an enhanced digital image having altered tone values.